We Claim:

1. A saw comprising:

a base assembly with a top surface;

a fence assembly mounted to the base assembly with a front surface positioned above the top surface of the base assembly, the front surface of the fence assembly and the top surface of the base assembly cooperating to support a workpiece thereon;

a saw support assembly rotatably mounted to the base assembly to rotate relative to the base assembly about a first rotational axis;

a saw unit having a saw blade capable of turning to cut a workpiece, the saw blade defining a cutting plane that is approximately parallel to the first rotational axis, the saw unit supported by the saw support assembly above the top surface so that the saw blade may be moved relative to the base assembly by a user into a workpiece resting on the top surface of the base assembly to make a cut, the saw unit and the saw support assembly rotating together about the first rotational axis to adjust the bevel angle of the saw blade; and

a bevel angle locking actuator mounted to the saw support assembly, wherein the bevel angle locking actuator rotates in unison with the saw support assembly about the first rotational axis when the bevel angle of the saw blade is adjusted, and wherein the bevel angle can be adjusted by a user when the bevel angle locking actuator is in an unlocked position

and the bevel angle cannot be adjusted by a user when the bevel angle locking actuator is in a locked position.

2. The saw of claim 1 wherein:

pivoting the bevel angle locking actuator to its locked position causes a surface of the saw support assembly to be moved against a surface of the base assembly to increase the pressure between the surfaces, the increased pressure resulting in increased friction which resists rotation of the saw support assembly relative to the base assembly.

3. The saw of claim 1 wherein:

the bevel angle locking actuator is pivotally mounted to the saw support assembly to pivot about an axis approximately normal to the first rotational axis, the bevel angle locking actuator pivoting relative to the saw support assembly between its locked position and unlocked position.

4. The saw of claim 1 wherein:

the bevel angle locking actuator is pivotally mounted to the saw support assembly and pivots about a pivoting axis relative to the saw support assembly between its locked position and unlocked position.

5. The saw of claim 4 further comprising:

an eccentric surface eccentrically formed from the pivoting axis of the bevel angle locking actuator, the eccentric surface being operatively connected to the bevel angle locking actuator; and

a linkage;

wherein pivoting of the bevel angle locking actuator to the locked position causes the eccentric surface to pivot, the pivoting of the eccentric surface driving a movement of the linkage, the movement of the linkage pushing a surface of the saw support assembly against a surface of the base assembly to lock the bevel angle.

6. The saw of claim 5 further comprising:

a pin extending between the base assembly and the saw support assembly, the pin having a first end with a flange extending out from the saw support assembly;

wherein pivoting of the bevel angle locking actuator to the locked position causes the eccentric surface to pivot, the pivoting of the eccentric surface driving a movement of the linkage, the movement of the linkage causing the linkage to be wedged between the flange and the saw support assembly to push a surface of the saw support assembly against a surface of the base assembly to lock the bevel angle.

7. The saw of claim 6 wherein the pin is approximately coaxial with the first rotational axis.

8. The saw of claim 1 wherein:

the base assembly further comprises a base and a turntable rotatably mounted on the base to turn about a vertical axis, the vertical axis being approximately normal to the first rotational axis; and

the saw support assembly is rotatably mounted to the base assembly at the turntable.

9. The saw of claim 8 wherein:

pivoting the bevel angle locking actuator to its locked position causes a surface of the turntable to be moved against a surface of the base assembly to increase the pressure between the surfaces, the increased pressure resulting in increased friction which resists rotation of the saw support assembly relative to the base assembly.

10. The saw of claim 8 wherein:

the bevel angle locking actuator is pivotally mounted to the saw support assembly to pivot about an axis approximately normal to the first rotational axis, the bevel angle locking actuator pivoting relative to the saw support assembly between its locked position and unlocked position.

11. The saw of claim 8 wherein:

the bevel angle locking actuator is pivotally mounted to the saw support assembly and pivots about a pivoting axis relative to the saw support assembly between its locked position and unlocked position.

12. The saw of claim 11 further comprising:

an eccentric surface eccentrically formed from the pivoting axis of the bevel angle locking actuator, the eccentric surface being operatively connected to the bevel angle locking actuator; and

a linkage;

wherein pivoting of the bevel angle locking actuator to the locked position causes the eccentric surface to pivot, the pivoting of the eccentric surface driving a movement of the linkage, the movement of the linkage pushing a surface of the saw support assembly against a surface of the turntable to lock the bevel angle.

13. The saw of claim 12 further comprising:

a pin extending between the turntable and the saw support assembly, the pin having a first end with a flange extending out from the saw support assembly;

wherein pivoting of the bevel angle locking actuator to the locked position causes the eccentric surface to pivot, the pivoting of the eccentric surface driving a movement of the linkage, the movement of the linkage causing the linkage to be wedged between the flange and the saw support assembly to push a surface of the saw support assembly against a surface of the turntable to lock the bevel angle.

14. The saw of claim 13 wherein the pin is approximately coaxial with the first rotational axis.

15. The saw of claim 8 wherein:

the saw support assembly supports the saw unit pivotally so that the saw unit is pivoted about an axis approximately normal to the cutting plane to plunge the saw blade into a workpiece resting on the top surface of the base assembly.

16. The saw of claim 15 wherein:

pivoting the bevel angle locking actuator to its locked position causes a surface of the saw support assembly to be moved against a surface of the turntable to increase the pressure between the surfaces, the increased pressure resulting in increased friction which resists rotation of the saw support assembly relative to the base assembly.

17. The saw of claim 15 wherein:

the bevel angle locking actuator is pivotally mounted to the saw support assembly to pivot about an axis approximately normal to the first rotational axis, the bevel angle locking actuator pivoting relative to the saw support assembly between its locked position and unlocked position.

18. The saw of claim 15 wherein:

the bevel angle locking actuator is pivotally mounted to the saw support assembly and pivots about a pivoting axis relative to the saw support assembly between its locked position and unlocked position.

19. The saw of claim 18 further comprising:

an eccentric surface eccentrically formed from the pivoting axis of the bevel angle locking actuator, the eccentric surface being operatively connected to the bevel angle locking actuator; and

a linkage;

wherein pivoting of the bevel angle locking actuator to the locked position causes the eccentric surface to pivot, the pivoting of the eccentric surface driving a movement of the linkage, the movement of the linkage pushing a surface of the saw support assembly against a surface of the turntable to lock the bevel angle.

20. The saw of claim 19 further comprising:

a pin extending between the turntable and the saw support assembly, the pin having a first end with a flange extending out from the saw support assembly;

wherein pivoting of the bevel angle locking actuator to the locked position causes the eccentric surface to pivot, the pivoting of the eccentric surface driving a movement of the linkage, the movement of the linkage causing the linkage to be wedged between the flange and the saw support assembly to push a surface of the saw support assembly against a surface of the turntable to lock the bevel angle.

21. The saw of claim 20 wherein the pin is approximately coaxial with the first rotational axis.

22. The saw of claim 15 wherein the saw unit comprises an upper arm and the saw support assembly comprises a lower arm, the upper arm being pivotally connected to the saw support assembly.

23. The saw of claim 22 wherein:

pivoting the bevel angle locking actuator to its locked position causes a surface of the saw support assembly to be moved against a surface of the turntable to increase the pressure between the surfaces, the increased pressure resulting in increased friction which resists rotation of the saw support assembly relative to the base assembly.

24. The saw of claim 22 wherein:

the bevel angle locking actuator is pivotally mounted to the saw support assembly to pivot about an axis approximately normal to the first rotational axis, the bevel angle locking actuator pivoting relative to the saw support assembly between its locked position and unlocked position.

25. The saw of claim 22 wherein:

the bevel angle locking actuator is pivotally mounted to the saw support assembly and pivots about a pivoting axis relative to the saw support assembly between its locked position and unlocked position.

26. The saw of claim 25 further comprising:

an eccentric surface eccentrically formed from the pivoting axis of the bevel angle locking actuator, the eccentric surface being operatively connected to the bevel angle locking actuator; and

a linkage;

wherein pivoting of the bevel angle locking actuator to the locked position causes the eccentric surface to pivot, the pivoting of the eccentric surface driving a movement of the linkage, the movement of the linkage pushing a surface of the saw support assembly against a surface of the turntable to lock the bevel angle.

27. The saw of claim 26 further comprising:

a pin extending between the turntable and the saw support assembly, the pin having a first end with a flange extending out from the saw support assembly;

wherein pivoting of the bevel angle locking actuator to the locked position causes the eccentric surface to pivot, the pivoting of the eccentric surface driving a movement of the linkage, the movement of the linkage causing the linkage to be wedged between the flange and the saw support assembly to push a surface of the saw support assembly against a surface of the turntable to lock the bevel angle.

28. The saw of claim 27 wherein the pin is approximately coaxial with the first rotational axis.

29. The saw of claim 1 wherein the bevel angle locking actuator comprises an elongated lever.

30. The saw of claim 29 wherein the elongated lever is formed from stamped sheet metal.

31. The saw of claim 29 wherein the saw support assembly comprises a lower arm, and when the bevel angle locking actuator is in the locked position, the elongated lever extends generally parallel to the lower arm.

32. A method of locking the bevel angle of a bench top saw, the bench top saw comprising a base assembly with a top surface, a saw support assembly rotatably mounted to the base assembly to rotate relative to the base assembly about a first rotational axis, a saw unit having a saw blade defining a cutting plane that is approximately parallel to the first rotational axis, the saw unit supported by the saw support assembly above the top surface so that the saw blade may be moved relative to the base assembly by a user into a workpiece resting on the top surface of the base assembly to make a cut, the saw unit and the saw support assembly rotating together about the first rotational axis to adjust the bevel angle of the saw blade, and a bevel angle locking actuator mounted to the saw support assembly,

the method comprising:

moving the bevel angle locking actuator from a locked to an unlocked position;

rotating the saw support assembly, the saw unit, and the bevel angle locking actuator in unison about the first rotational axis until the saw blade reaches a new bevel angle; and

moving the bevel angle locking actuator to a locked position.

33. The method of claim 32 wherein:

moving the bevel angle locking actuator to a locked position further comprises pivoting the bevel angle locking actuator relative to the saw support assembly.

34. The method of claim 32 wherein:

moving the bevel angle locking actuator to a locked position further comprises pivoting the bevel angle locking actuator relative to the saw support assembly about a pivoting axis approximately normal to the cutting plane.

35. The method of claim 32 wherein:

moving the bevel angle locking actuator to a locked position further comprises rotating an eccentric surface operatively connected to the bevel angle locking actuator.

36. The method of claim 35 wherein:

moving the bevel angle locking actuator to a locked position further comprises moving a linkage in response to the rotating of the eccentric surface.

37. The method of claim 36 wherein:

moving the bevel angle locking actuator to a locked position further comprises wedging the linkage against a pin extending from the base assembly through the saw support assembly in response to the moving of the linkage.

38. The method of claim 37 wherein:

moving the bevel angle locking actuator to a locked position further comprises wedging the linkage between a flange of the pin and the saw support assembly to push the saw support assembly against the base assembly.

39. A saw comprising:

a base assembly with a top surface;

a fence assembly mounted to the base assembly with a front surface positioned above the top surface of the base assembly, the front surface of the fence assembly and the top surface of the base assembly cooperating to support a workpiece thereon;

a saw support assembly rotatably mounted to the base assembly to rotate relative to the base assembly about a first rotational axis;

a saw unit having a saw blade capable of turning to cut a workpiece, the saw blade defining a cutting plane that is approximately parallel to the first rotational axis, the saw unit supported by the saw support assembly above the top surface so that the saw blade may be moved by a user into a workpiece resting on the top surface of the base assembly to make a cut, the saw unit and the saw support assembly rotating together about the first rotational axis to adjust the bevel angle of the saw blade;

a pin extending between the base assembly and the saw support assembly, the pin defining a longitudinal axis and having a first end with a flange; and

a linkage movable relative to the pin, a movement of the linkage wedging the linkage against the flange and causing a surface on the saw support assembly and a surface on the base assembly to be pushed against one another to lock the bevel angle with friction;

wherein the movement of the linkage is not a rotation about the longitudinal axis of the pin.

40. The saw of claim 39:

wherein the pin further comprises a second end opposite the first end, the second end being anchored to the base assembly; and

wherein the movement of the linkage wedges the linkage between the flange and the saw support assembly causing a surface on the saw support assembly and a surface on the base assembly to be pushed against one another to lock the bevel angle with friction.

41. A method of locking the bevel angle of a bench top saw, the bench top saw comprising a base assembly with a top surface, a saw support assembly rotatably mounted to the base assembly to rotate relative to the base assembly about a first rotational axis, a saw unit having a saw blade capable of turning to cut a workpiece, the saw blade defining a cutting plane that is approximately parallel to the first rotational axis, the saw unit supported by the saw support assembly above the top surface, the saw unit and the saw support assembly rotating together about the first rotational axis to adjust the bevel angle of the saw blade, a pin extending between the base assembly and the saw support assembly, the pin defining a longitudinal axis and having a first end with a flange,

the method comprising:

moving a linkage relative to the pin in a direction other than a rotation around the lingitudinal axis of the pin so that the linkage wedges between the flange and the saw support assembly;

the wedging of the linkage causing the saw support assembly to be pressed against the base assembly.

42. A saw comprising:

a base assembly;

a saw unit having a saw blade turning to cut a workpiece;

a saw support assembly rotatably mounted to the base assembly, the saw support assembly rotating relative to the base assembly about a first rotational axis to adjust the bevel angle of the saw blade, and the saw support assembly supporting the saw unit;

the saw support assembly further comprising a lower arm and an insert attached to the lower arm, the insert being made of a different metal than the lower arm;

wherein the insert extends from the saw support assembly, and contacts and moves relative to the base assembly when the bevel angle is adjusted.

43. The saw of claim 42 further comprising:

a first surface formed on the base assembly and a second surface formed on the saw support assembly wherein when the second surface is pressed against and engaged with the first surface, the bevel angle of the saw blade is locked; and

at least a portion of the second surface is formed on the insert.

44. The saw of claim 43 wherein:

the insert is attached to the lower arm with fasteners.

45. The saw of claim 43 wherein:

the first and second surfaces are a pair of mating male and female conical surfaces.

46. The saw of claim 43 wherein the insert is made from cast iron.

47. A saw comprising:

a base assembly with a top surface;

a fence assembly mounted to the base assembly with a front surface positioned above the top surface of the base assembly, the front surface of the fence assembly and the top surface of the base assembly cooperating to support a workpiece thereon;

a saw support assembly rotatably mounted to the base assembly to rotate relative to the base assembly about a first rotational axis;

a saw unit having a saw blade capable of turning to cut a workpiece, the saw blade defining a cutting plane that is parallel to the first rotational axis, the saw unit supported by the saw support assembly above the top surface so that the saw blade may be moved by a user into a workpiece resting on the top surface of the base assembly to make a cut, the saw unit and the saw support assembly rotating together about the first rotational axis to adjust the bevel angle of the saw blade;

a pin extending between the base assembly and the saw support assembly, a first end of the pin having a flange; and

a spring positioned around the pin so that the flange is one side of the spring and the base assembly and the saw support assembly are on the other side of the spring, the spring biasing the flange away from the saw support assembly and the base assembly causing the saw support assembly and the base assembly to be biased towards one another.

48. The saw according to claim 47 wherein:

a second end of the pin opposite the first end is anchored to the base assembly.

49. The saw according to claim 48 wherein:

the spring pushes against the flange at one end of the spring and pushes against the saw support assembly at the other end of the spring to bias the saw support assembly towards the base assembly.

50. The saw of claim 49 wherein:

the base assembly further comprises a base and a turntable rotatably mounted on the base to turn about a vertical axis, the vertical axis being approximately normal to the first rotational axis; and

the saw support assembly is rotatably mounted to the base assembly at the turntable.

51. The saw of claim 50 wherein:

the saw support assembly supports the saw unit pivotally so that the saw unit is pivoted about an axis approximately normal to the cutting plane to plunge the saw blade into a workpiece resting on the top surface of the base assembly.

52. A saw comprising:

a base assembly;

a saw unit having a saw blade turning about a second rotational axis to cut a workpiece;

a saw support assembly rotatably mounted to the base assembly, the saw support assembly rotating relative to the base assembly about a first rotational axis to adjust the bevel angle of the saw blade, and the saw support assembly supporting the saw unit and pivoting the saw unit to plunge the saw blade into a workpiece resting on the base assembly;

a bevel locking lever pivotally mounted to the saw support assembly, the bevel locking lever pivoting relative to the saw support assembly about a third rotational axis not parallel with the first rotational axis.

53. The saw of claim 52 wherein the third rotational axis is approximately perpendicular to the first rotational axis.

54. A saw comprising:

a base assembly;

a saw unit having a saw blade;

a saw support assembly rotatably mounted to the base assembly, the saw support assembly supporting the saw unit and pivoting the saw unit to plunge the saw blade into a workpiece resting on the base assembly, the saw support assembly rotating relative to the base assembly about a first rotational axis to adjust the bevel angle of the saw blade;

a bevel locking linkage which translates in a direction normal to the first rotational axis, the translation of the bevel locking linkage causing the saw support assembly to be pushed against the base assembly creating friction which prevents relative rotation.